Supports Item No. 1
T&T Committee Agenda
October 28, 2008

CITY OF VANCOUVER

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ADMINISTRATIVE REPORT

Report Date:	October 14, 2008
Contact:	David Ramslie
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Meeting Date:	October 28, 2008

TO: Standing Committee on Transportation and Traffic

FROM: Director of Planning in consultation with the Director of Development Services, the Manager of the Sustainability Group, the Chief Building Official, and the Director of Legal Services

SUBJECT: EcoDensity Revised Action C-10 (May 2008): Amendments to the Zoning and Development By-law to Remove Barriers to Green Building Approaches

RECOMMENDATION

A. THAT the Director of Planning be instructed to make an application to amend the Zoning and Development By-law, generally in accordance with Appendix A, to remove certain barriers to using green building approaches in construction, and to similarly amend the Downtown Official Development Plan By-law, Downtown Eastside/Oppenheimer Official Development Plan By-law, First Shaughnessy Official Development Plan By-law, and Southeast Granville Slopes Official Development Plan By-law, generally in accordance with Appendix A; and

FURTHER THAT the Director of Legal Services be instructed to prepare the necessary amendments to the Zoning and Development By-law, generally in accordance with Appendix A, and to the Downtown Official Development Plan By-law, Downtown Eastside/Oppenheimer Official Development Plan By-law, First Shaughnessy Official Development Plan By-law, and Southeast Granville Slopes Official Development Plan By-law, generally in accordance with Appendix A, for consideration at public hearing.

B. THAT staff be directed to consult with the UDI (Urban Development Institute) and other interested stakeholders in early 2009 to review the existing enclosed balcony exclusion and Guidelines, in light of the addition of new exemptions by Council and evolving City priorities.

CITY MANAGER'S COMMENTS

The City Manager RECOMMENDS approval of A and B.

COUNCIL POLICY

This report proposes amendments to Vancouver's Zoning and Development By-law and the *Floor Space Exclusion for Additional Wall Thickness to Control Building Envelope Leaks* bulletin; and will lead to updates to the *Balcony Enclosure Guidelines*.

This report is directly related to the EcoDensity initiative. On June 10, 2008, Council unanimously approved the EcoDensity Charter and the majority of the proposed Initial Actions, including Action C-10, the subject of this report.

SUMMARY AND PURPOSE

The purpose of this report is to propose amendments to the Zoning and Development By-law ("the By-law") that will remove barriers to using the following specified green building approaches. The proposed amendments involve:

A. providing opportunities to relax building height regulations for roof-mounted energy technologies and to provide access to green roofs

B. providing opportunities to relax side yard and overhang requirements for fixed external shading devices

C. providing opportunities to allow thicker wall assemblies that facilitate higher insulation standards

In addition, there are amendments that are currently being worked on and which staff will report back on after consultation with stakeholders in 2009:

D. providing opportunities for larger shaded external balconies and reviewing the current enclosed balcony exclusion and Guidelines

E. providing opportunities to allow exclusions for at-grade waste storage facilities

BACKGROUND

The EcoDensity program was launched in 2006. Staff combined a comprehensive program of outreach and engagement with intensive idea-generating, resulting in the draft EcoDensity Charter and Initial Actions. After further public consultation and 3 more drafts, Council approved the *Charter* and Initial Actions in June 2008, and authorized staff to move forward on work programs.

The proposed by-law changes in this report stem from one of the Initial Actions - Revised Initial Action C-10 (May 2008). This action is meant to "remove or mitigate existing disincentives to greener building design practices". This action is part of a larger suite of

ideas and plans that will move Vancouver toward goals such as carbon neutral new construction.

DISCUSSION

A number of current City regulations limit the use of green building approaches - particularly in the ways in which floor space is counted and how the allowable height/size of a building is determined. Allowing some flexibility on particular issues in the By-law will reduce barriers to using better building practices.

The following sections discuss five barriers and identify proposed solutions or directions. This is not an exhaustive or final list - these are the first of several by-law changes that will aim to facilitate greener building practices. The EcoDensity Charter calls for approaches to be implemented, monitored and adapted in a dynamic way, this staff intend to review and update the proposed amendments within the next 5 years.

A. Providing opportunities to relax building height regulations for roof-mounted energy technologies and to provide access to green roofs

Staff are proposing a way to allow applicants to situate renewable energy technologies or allow access to green roofs on rooftops without losing building height.

Under the current By-law, applicants would not be able to maximize their usable floor space because either of these options would have to be provided within building height limits. Allowing some height discretion for these better practices would make them more viable to applicants.

Section 10.11.1 of the By-law allows for some discretionary relaxation of roof height limits for architectural, mechanical and other features. Staff propose adding appropriately located and designed roof mounted energy technologies and access to green roofs to this existing list of allowable rationales to permit greater height (see Appendix A).

Roof mounted energy technologies could include photovoltaics, solar/thermal collectors, and micro wind turbines. Access to green roofs could include access and/or infrastructure to maintain and support a green roof. Staff have developed a draft explanatory Bulletin - *Opportunities for Height Relaxation - Roof-Mounted Energy Technologies and Green Roofs* - that can be found in Appendix B.

By allowing some discretion for these specific green building approaches, the City would be building upon the existing discretion in the By-law and removing elements that limit these practices.

B. Providing opportunities to relax side yard and overhang requirements for fixed external shading devices

Staff would like to encourage the use of fixed external shading devices to provide passive solar shading. Examples of shading devices include awnings, canopies, and building overhangs.

Current side yard requirements limit the use of shading devices because of encroachment issues. Section 10.7.1 of the By-law allows for some discretion with regard to yard requirements for balconies, canopies, and bay windows. Staff propose adding the words "fixed external shading devices" to the existing set of allowable projections so that several types might be permitted (see Appendix A). Staff have developed a draft explanatory Bulletin - *Opportunities for Relaxation - Side Yard and Overhang Requirements* - that can be found in Appendix C.

By allowing some discretion for this passive solar design practice, we would be building upon the existing discretion in the By-law and creating options for applicants to provide shade in a variety of ways.

C. Providing opportunities to allow thicker wall assemblies

Staff are proposing to allow floor space exclusions for thicker wall assemblies provided that they demonstrate better energy performance. This will provide an incentive to build better insulated - thicker - walls. The concept of "better energy performance" will be quantified using an RSI factor (the RSI factor associated with insulation represents thermal resistance per millimetre for a given material - the higher the number, the better the thermal performance of the insulation).

Currently, FSR exclusion for exterior wall thickness is specified in most District Schedules, and some Official Development Plans (ODP's) and CD-1's. Staff propose amending the applicable zones and ODP's to state that for wood-frame construction, applicants must meet RSI 3.85 (R-22) and allowable wall space exemptions become 204 mm (8"), in order to line up with a new insulation requirement. And for multi-family and other types of construction, if applicants meet RSI 2.65 (R-15), then exclusion from FSR of wall assemblies could be allowed up to 432 mm (17") thick.

Applicants would continue to consult the Bulletin on exclusions (*Floor Space Exclusion for Additional Wall Thickness to Control Building Envelope Leaks*). The process for exclusions (currently allowed for better rain screening) is outlined in this Bulletin: the applicant must submit a schedule of wall types, a summary table, and a letter from a Building Envelope Professional recommending the requested wall type. Staff propose amending the existing Bulletin (substantially as shown in Appendix D) to state that better thermal performance is also an allowable rationale for floor space exclusions. Applicants would continue to apply in the existing way, but would demonstrate the required RSI factor with verification from a Registered Professional (architect or engineer).

The proposed amendment would allow for thicker wall assemblies within the current process and standard of allowing exclusions. These changes would remove the deterrent to building thicker walls, as usable floor space will not be lost.

D. Providing opportunities for larger shaded *external* balconies and reviewing the current *enclosed* balcony exclusion and Guidelines

Staff would like to encourage the use of external open balconies that demonstrate passive solar shading. As such, staff are considering bolstering the allowable *external* balcony space and exploring the current usage of the enclosed balcony exemption.

Currently, allowable external balcony space is 8% of the provided residential floor area. Enclosed residential balconies can be excluded from the computation of floor space ratio, provided that the total for both external and enclosed balcony area does not exceed 8% of the residential floor area being provided, further, no more than 50% of the total excluded balcony floor area is enclosed.

In terms of external balconies, staff are currently exploring an option to amend the By-law to increase allowable external balcony space if passive solar shading performance can be shown. This change would be intended to allow greater external balcony space in exchange for simple passive design to reduce solar heat gain. Staff will report back on this work.

Staff have also been considering the future of the existing enclosed balcony exemption for some time. It is felt that much of the original rationale for the exemption may no longer exist. The exemption translates into a reduced DCL and potential CAC calculation, thus affecting the City's ability to keep up with the provision of neighbourhood amenities and benefits. The original rationale for enclosing open balconies in the 1980's was to address water penetration in existing buildings where leaks at balcony exterior wall junctures and doors was becoming common. This was subsequently expanded to apply to new construction based on the rationale that better use of open balconies in our climate was feasible if they were enclosed, primarily with glass, providing an in-suite amenity, such as a small solarium or indoor garden area, but having many of the attributes of an open balcony. In addition, enclosed balconies have provided a more usable space in harsh acoustic locations such as on major arterials where heavy traffic noise impacted open balconies.

While the original intent for enclosing some balconies may still have merit, experience has shown that some developers often strive to maximize the FSR exclusion (potentially up to 4 percent of residential floor area) while configuring and marketing them as typical interior spaces like dens, thereby bringing into question the rationale for excluding them from FSR. Many such "balconies" do not have the clearly exterior expression called for in the Council direction. The struggle to reconcile the often conflicting By-law and guideline intent for enclosed balconies with the developers' objective of maximizing marketable floor area and excludable FSR consumes considerable staff and applicant time in the negotiation and design review of these spaces. Further, in today's context of green building design, the extensively glazed exterior walls sought for enclosed balconies can be at odds with the imperative for effective passive solar heat gain control on south and southwest faces of buildings. It is notable that some developers have chosen to forego enclosed balconies in their developments, recognizing that all the complications, some of which can affect their future purchasers, do not justify the floor area exclusion.

The intent of this report is to add new exemptions, and staff would anticipate phasing out existing exemptions that no longer provide a public interest benefit as part of the process. Thus the intent is to reconsider and perhaps ultimately delete or reconfigure the enclosed balcony exemption while adding in more-than-compensating exemptions that better match

the City's current priorities around passive energy performance etc. This intent has been messaged informally to the land development industry for approximately 18 months, although no formal discussions between UDI and staff have been logistically possible. UDI has expressed strong concern regarding the removal or reconsideration of this existing exemption. It is, however, staffs' perspective that such a review is necessary, and that direction from Council to undertake such a review is appropriate in coordination with the approval of new exemptions. Therefore Recommendation B asks Council to direct staff to consult with UDI and other interested stakeholders regarding the future of the enclosed balcony exemption in early 2009, and then report back.

E. Providing opportunities to allow exclusions for at-grade waste storage facilities

Staff would like to exclude at-grade waste storage space from floor space calculations to encourage at-grade storage, located on the lane wherever there is lane access, and reduce the number of truck trips made in and out of a building.

Currently, at-grade waste storage space (if it is not co-located with a loading bay) is counted as floor space. Many buildings have waste storage rooms below grade, and require two trucks to service the bin: the low-profile jitni accesses the below-grade bin, which is brought up and stored at-grade until a service vehicle - the hauler - empties the bin. The bin sits at-grade until the jitni returns to put it below grade.

Staff propose allowing some measure of discretion based on that waste storage space allocation guideline to allow at grade waste storage space to be excluded from floor space calculations. These amendments would simplify the waste removal process and eliminate redundant vehicle trips in and out of buildings. Staff are currently working to more precisely determine a waste storage space allocation guideline. Staff will report back on this issue.

FINANCIAL IMPLICATIONS

There are no financial implications.

ENVIRONMENTAL IMPLICATIONS

More widespread use of the green building practices outlined in this report will ultimately reduce energy use and result in greenhouse gas savings.

CONCLUSION

This report recommends amending the Zoning and Development By-law and specific Bulletins and Guidelines. If approved, staff propose reviewing and updating the recommended exemptions no later than 2014. These amendments will effectively remove the disincentives to using the noted green building approaches, resulting in greater adoption of these better practices, which will contribute to lower energy use. In the big picture, these changes represent a step toward the City of Vancouver's commitment to carbon neutrality for all new building by 2030.

* * * * *

PROPOSED MISCELLANEOUS TEXT AMENDMENTS
ZONING AND DEVELOPMENT BY-LAW

[All additions are shown in ***bold italics***. Deletions are shown in ~~strikeout~~.]

By-law amendments will be prepared generally in accordance with the provisions listed below and are subject to change and refinement prior to by-law posting.

Section 10 General Regulations

10.7.1 The following features shall be permitted in any required yard:

(a) steps, except that no steps shall be permitted in any side yard except an exterior side yard;
(b) eaves, gutters, sills and chimneys or other similar projections as determined by the Director of Planning, if they do not project more than 540 mm, measured horizontally, into a required yard;
(c) balconies on multiple dwellings, if:
    (i) they do not project more than 1.2 m into a required yard and in no case are closer than 2.1 m to an interior side property line; and
    (ii) the safety railing does not extend more than 1 070 mm above the floor of the balcony.
(d) ***fixed horizontal external shading devices including*** canopies, ***awnings, and overhangs,*** if:
    (i) they are cantilevered;
    (ii) they do not project more than 1.2 m measured at right angles to the face of the building; and
    (iii) they are not located closer than .3 m measured horizontally from any window of a habitable room where any part of such window is located below the level of the canopy.
(e) bay windows, if:
    (i) they do not project more than 540 mm into the required yard;
    (ii) the bottom outside edge of the bay is not less than 300 mm above the floor level;
    (iii) the area contained within the bay window projection is not used for any purpose other than to provide light and ventilation.
(f) any other features which, in the opinion of the Director of Planning, are similar to any of the features listed above.

10.11.1 ***Discretionary Increases in Height for Any Building***

The Director of Planning may, at his discretion, permit a greater height than otherwise permitted for the following items if they do not, in total, exceed one-third of the width of the building or buildings as measured on any elevation drawings and do not, in total, cover more than 10 percent of the roof area on which they are located as viewed from directly above:

(a) architectural appurtenances such as towers, turrets, ***and*** cupolas ~~and roof garden access~~, provided:
    (i) no additional floor area is created; and
    (ii) no protrusion extends more than 1.1 m above the height limitation;
(b) mechanical appurtenances such as elevator machine rooms;
(c) chimneys;
(d) roof-mounted energy technologies including solar panels and wind turbines, provided:
    (i) the Director of Planning approves their :

(A) siting and sizing in relation to views, overlook, shadowing, and noise impacts, and

(B) architectural design in relation to the surrounding environment; and

(ii) they comply with the Building By-law;

(e) access and infrastructure, including higher elevators, pergolas, trellises, and tool sheds, to maintain and support intensive green roofs or urban agriculture provided:

(i) the Director of Planning approves their :

(A) siting and sizing in relation to views, overlook, shadowing, and noise impacts, and

(B) architectural design in relation to the surrounding environment; and

(ii) they comply with the Building By-law; and

(f) items similar to any of the above.

10.34 Exterior walls in CD-1 districts

10.34.1 Despite anything to the contrary in any CD-1 by-law listed in the CD-1 (Comprehensive Development) District Schedule that permits one-family dwelling and two-family dwelling uses, computation of floor space ratio or floor area is to exclude, in any case where a registered professional, as defined in the Building By-law, has verified that exterior:

(i)wood frame construction walls greater than 152 mm thick meet the standard RSI 3.85 (R-22), or

(ii)walls other than wood frame construction greater than 152 mm thick meet the standard RSI 2.67 (R-15),

the area of such walls that exceeds 152 mm to a maximum exclusion of 204 mm of thickness for wood frame construction walls and 432 mm of thickness for other walls, except that this clause is not to apply to walls in existence before March 14, 2000.

Substitute the following in the sections/sub-sections of the relevant District Schedules and ODP's (as listed on the next page):

Floor Space Ratio

The following shall be excluded in the computation of floor space ratio:

where a registered professional, as defined in the Building By-law, has verified that exterior:

(i) wood frame construction walls greater than 152 mm thick meet the standard RSI 3.85 (R-22), or

(ii) walls other than wood frame construction greater than 152 mm thick meet the standard RSI 2.67 (R-15),

the area of such walls that exceeds 152 mm to a maximum exclusion of 204 mm of thickness for wood frame construction walls and 432 mm of thickness for other walls, except that this clause is not to apply to walls in existence before March 14, 2000.

ZDBL zones:

Limited Agriculture	
RA-1	4.7.3(g)
One-Family Dwelling	
RS-1	4.7.3(h)
RS-1A	4.7.3(g)
RS-1B	4.7.3(g)
RS-2	4.7.3(g)
RS-3 and RS-3A	4.7.3(i)
RS-4	4.7.3(g)
RS-5	4.7.3(i)
RS-6	4.7.3(j)
RS-7	4.7.4(j)
Two-Family Dwelling	
RT-1	4.7.3(g)
RT-2	4.7.3(g)
RT-3	4.7.3(i)
RT-4, RT-4A, RT-4N and RT-4AN	4.7.3(h)
RT-5, RT-5A, RT-5N and RT-5AN	4.7.3(h)
RT-6	4.7.3(i)
RT-7	4.7.3(h)
RT-8	4.7.3(h)
RT-9	4.7.3(h)
RT-10 and RT-10N	4.7.3(g)
Multiple Dwelling	
RM-1 and RM-1N	4.7.3(g)
RM-2	4.7.3(g)
RM-3	4.7.3(g)
RM-3A	4.7.3(g)
RM-4 and RM-4N	4.7.3(g)
RM-5, RM-5A, RM-5B and RM-5C	4.7.3(i)
RM-6	4.7.3(i)
FM-1	4.7.3(h)
Commercial	
C-1	4.7.3(f)
C-2	4.7.3(f)
C-2B	4.7.3(f)
C-2C	4.7.3(f)
C-2C1	4.7.3(f)
C-3A	4.7.3(e)
C-5 and C-6	4.7.3(e)
C-7 and C-8	4.7.3(f)
FC-1	4.7.3(f)
Industrial	
MC-1 and MC-2	4.7.3(f)
M-1	4.7.3(e)
M-1A	4.7.3(e)
M-1B	4.7.3(e)
M-2	4.7.3(e)
IC-1 and IC-2	4.7.3(f)
IC-3	4.7.3(f)
I-1	4.7.3(f)
I-2	4.7.3(f)
I-3	4.7.3(f)

Historic Area	
HA-1 and HA-1A	4.7.1
HA-3	4.7.3(f)
ODP's:	
Downtown District	6(e)
DTES/Oppenheimer	4.5.2(e)
First Shaughnessy	4.1.3(f)
Southeast Granville Slopes	6.3.3(g)

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Opportunities for Discretionary Height Increases - Roof-Mounted Energy Technologies and Green Roofs

Authority – City Council Resolution
Effective (insert date)

1 Introduction

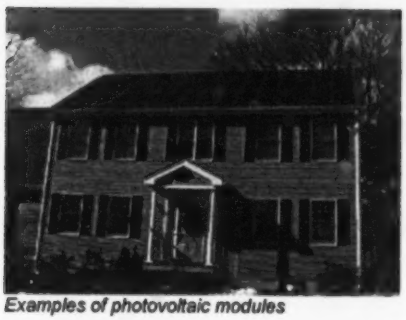
Under Section 10, General Regulations of the Zoning and Development By-law, the Director of Planning may consider additional height to facilitate the use of certain green building technologies.

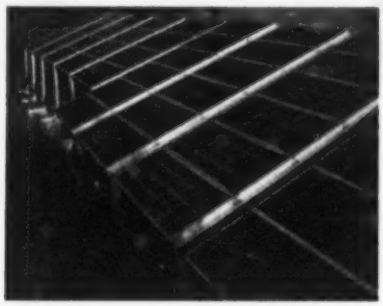
The purpose of this bulletin is to provide clarification to applicants on the types of roof mounted technologies and the infrastructure for green roofs that will be considered by the Director of Planning for a building height relaxation.

2 Roof-Mounted Energy Technologies

There are currently three main types of roof-mounted energy technologies:

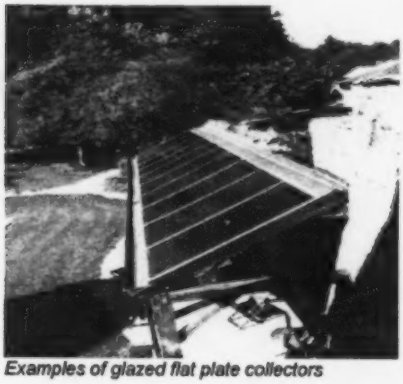
Photovoltaics convert light directly into electricity. Photovoltaics (PV) are the simplest form of alternative energy. There are no moving parts in PV modules and little maintenance is required. There are many different types of PV solar cells available.





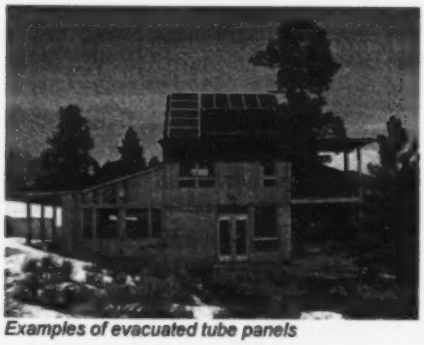
Examples of photovoltaic modules

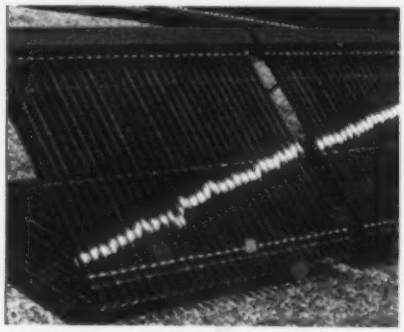
PV modules require an unobstructed and unshaded view of the sun for optimal performance. **Solar thermal collectors** absorb solar radiation to provide heat. *Glazed flat plate* collectors are the most commonly used collectors for domestic applications. Generally flat-plate collectors consist of (1) a flat-plate absorber, which intercepts and absorbs the solar energy, (2) a transparent cover that allows solar energy to pass through, (3) a heat-transport fluid (air or water) flowing through tubes to remove heat from the absorber, and (4) a heat insulating backing. For storage, these systems typically use an insulated tank in or near the mechanical room.



Examples of glazed flat plate collectors

The other most common type of solar thermal collector is the *evacuated tube* collector. This type has multiple evacuated glass tubes which heat up solar absorbers and, ultimately, solar working fluid (water or propylene glycol) in order to heat domestic hot water or for hydronic space heating. The vacuum within the evacuated tubes reduces conducted heat losses.

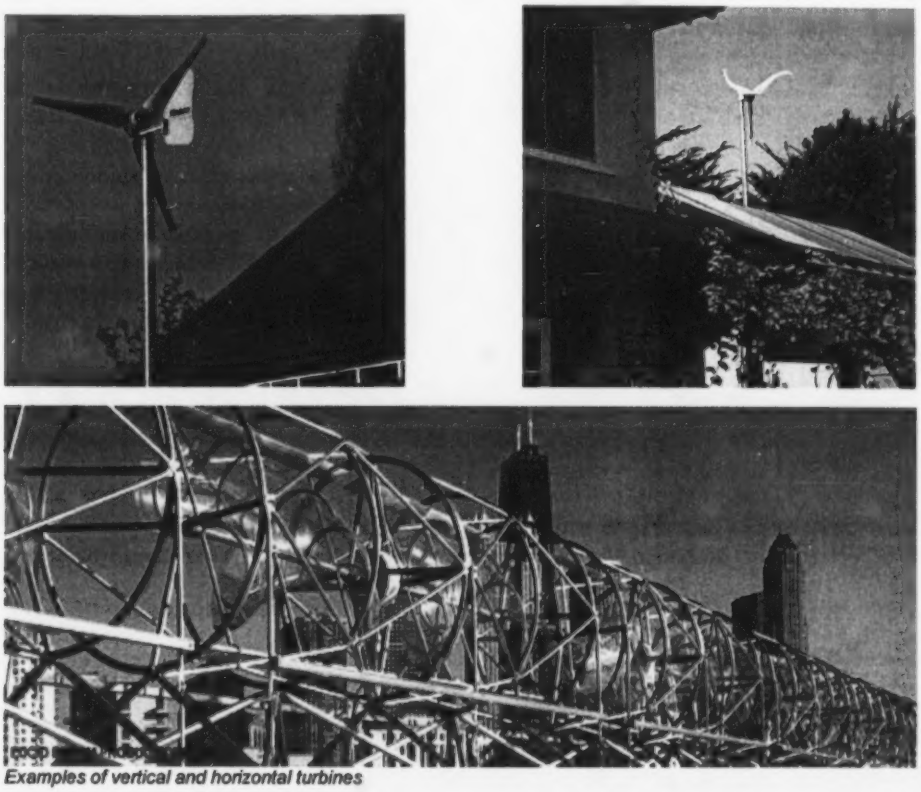




Examples of evacuated tube panels

A sloped, south-facing collector with minimal shading from nearby trees and buildings is optimal.

Micro wind turbines use the wind's lift forces to rotate aerodynamic blades that turn a rotor which creates electricity. In contrast to the farms of towering wind turbines in rural areas, it is becoming more common to see "micro" small-scale turbines that fit on top of buildings. The idea is to generate electricity from wind in urban settings, often to supplement on-grid electricity.



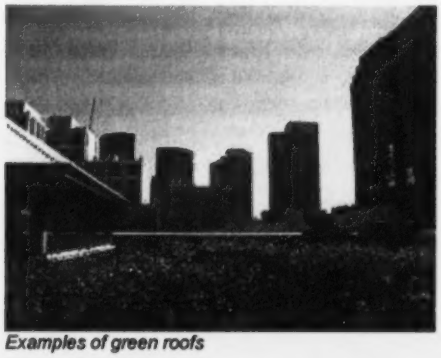
Examples of vertical and horizontal turbines

Vertical turbines typically look like propellers mounted on poles, and *horizontal* turbines resemble fans encased in a light structure. Both types typically have several turbines lined up next to each other to aggregate power generation.

The ideal siting positions the units as high as possible in the given context, away from obstructions like large trees or buildings, and with as little turbulence as possible.

3 Access to, and Infrastructure for Green Roofs

A green roof system is an extension of the existing roof which involves a high quality water proofing and root repellant system, a drainage system, filter cloth, a lightweight growing medium, and plants.



Examples of green roofs

In some cases, the access to and/or infrastructure for green roofs justifies a building height relaxation, so that usable floor space is not lost to construction. Examples of acceptable access/infrastructure include: tool sheds, materials storage space, and elevator access.

4 Height Increases

Discretionary height increases will be considered provided that the Director of Planning approves the:

- siting and sizing of the installation or infrastructure in relation to views, overlook, shadowing, and noise impacts, and the
- architectural design in relation to the surrounding environment.

As well, they must comply with the Building By-law.

5 Submission Requirements

To apply for an increase in height, the following will be required, (in addition to standard submission requirements for development applications):

- A letter indicating the design rationale for the roof mounted technology or green roof, outlining any relevant information

- Drawings illustrating the design and placement of the energy installation, or green roof and its infrastructure.

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Opportunities for Projections – Side Yard and Overhang Requirements

Authority – City Council Resolution
Effective (insert date)

1 Introduction

The purpose of this bulletin is to provide clarification on the types of fixed external shading devices that are appropriate to be considered by the Director of Planning as projections into yards.

Under Section 10, General Regulations of the Zoning and Development By-law, the Director of Planning may allow certain projections in required yards, under stated conditions. Fixed external shading devices are one of the allowable projections (*fixed*, in this case, means affixed to the building. It is acceptable for the shading device to move and respond to solar angles, as for example, louvers do).

Fixed external shading devices such as canopies, awnings and/or building overhangs are key components of an overall plan of passive solar shading (cooling). Passive design produces buildings that have low energy costs, reduced maintenance, and greater comfort.

2 Fixed External Shading Devices

Awnings, canopies, and/or building overhangs (roof overhangs, eaves, balconies) may be allowed to project into side yards, provided that:

- they are cantilevered
- they do not project more than 1.2 m measured at right angles to the face of the building
- they are not located closer than .3 m measured horizontally from any window of a habitable room where any part of such window is located below the level of the shading device
- they are appropriately sited, oriented and sized to reduce solar gain

- they comply with the Vancouver Building By-law

3 Submission Requirements

To apply for a projection into a required side yard, the following will be required (in addition to standard submission requirements for development applications):

- A letter indicating the design rationale for the external shading strategy, indicating sun angles, shadow analysis or any other relevant information

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Floor Space Exclusion for Additional Wall Thickness: to Control Building Envelope Leaks and to Facilitate Better Thermal Performance

Authority - Director of Planning
Effective March 14, 2000
Amended December 14, 2004 ***and [insert date]***

On March 14, 2000, City Council enacted amendments to various schedules of the Zoning and Development By-law to allow floor space exclusions to provide construction incentives to control building envelope leaks. **On [insert date] City Council enacted amendments to various schedules of the Zoning and Development By-law to allow floor space exclusions to facilitate better thermal performance.**

The regulation permits exclusion of portions of exterior walls which are thicker than the minimum thickness frame walls currently permitted, which are typically 152 mm thick. This would allow exclusion of the wall thickness that is in excess of 152 mm, to a maximum exclusion of ~~152 mm~~ **432 mm (17")**, as recommended by a Building Envelope Professional, **or Registered Professional in the case of better thermal performance. For wood frame construction, wall assemblies can be up to 204 mm (8 inches) thick provided that applicants meet RSI 3.85 (R-22). For all other types of construction, wall assemblies can be up to 432 mm (17") thick provided that applicants meet RSI 2.65 (R-15).** Walls with a thickness up to and including 152 mm will continue to be included in floor space. Only the thickness in excess of 152 mm will be excluded, to a maximum exclusion of ~~152 mm~~ **432 mm (17")**.

This exclusion shall be applicable to new walls on new buildings as well as to new walls on existing buildings. The former is intended to remove the disincentive of loss of usable floor area to construct thicker walls on new buildings. The latter is intended to facilitate the repairs and replacement of walls on buildings which have been subject to leaks and water damage.

Other regulations which are used to control bulk and massing, including height, yards and setbacks would remain unchanged and would not be relaxed to accommodate this FSR exclusion. For upgrades to repair leaky walls, required relaxations to setbacks can be considered by the Director of Planning or the Board of Variance.

Submission Requirements

In order to assist staff in the processing of this exclusion, the following information will be required for the review of the development application:

- Additional information on the required tracing overlays, including a schedule of wall types indicating materials and dimensions and reference to applicable standards, identification on each tracing overlay of the location and extent of each wall type, a summary table for each floor indicating the requested floor space exclusion by wall type, and a summary total. **For applications related to better thermal performance, applicants must also demonstrate the required RSI factor.** (See figure on reverse side.)

- A letter from a Building Envelope Professional **(for building envelope) or Registered Professional (for thermal performance),** as defined in the Building By-law, sealed and signed, recommending the proposed wall types, as indicated on the tracing overlay, **or verifying the RSI factor.**

(staff will insert 2 wall assembly diagrams - concrete/steel and wood frame) akin to page 2 of existing Bulletin - to be done by consultants)